

Title (en)

Method and apparatus for measuring aspherical shape and method for manufacturing optical element using them

Title (de)

Verfahren und Apparat zur Messung einer aspherischen Form und Herstellungsverfahren eines optischen Elements unter ihrer Anwendung

Title (fr)

Procédé et appareil pour la mesure d' une forme asphérique et procédé de fabrication d' un élément optique qui les utilise

Publication

**EP 1033553 A2 20000906 (EN)**

Application

**EP 00104373 A 20000302**

Priority

JP 5586799 A 19990303

Abstract (en)

An aspherical reference surface 2 is manufactured with such a shape accuracy that an interference band appears according to the aspherical shape of a surface 1 to be measured, an aspherical wave front 3 is formed using the reference surface, and a large aspherical surface is measured from interference within a short time. The aspherical reference surface is an aspherical surface optical element 10 manufactured by fly-cutting or ELID-grinding, that produces the interference band from light reflected from the aspherical surface and predetermined reference light, and thereby measures the shape of the aspherical surface from interference. The aspherical surface optical element should be an aspherical reflecting mirror with such a shape accuracy that an interference band is generated and parallel light is reflected in the direction normal to the surface to be measured. Thus, the shape can be measured in a short time without using an aspherical surface standard. <IMAGE>

IPC 1-7

**G01B 11/24**

IPC 8 full level

**G01B 11/24** (2006.01)

CPC (source: EP US)

**G01B 11/2441** (2013.01 - EP US)

Designated contracting state (EPC)

DE FR GB NL SE

DOCDB simple family (publication)

**EP 1033553 A2 20000906; EP 1033553 A3 20010620; JP 2000249526 A 20000914; JP 3544628 B2 20040721; US 6624895 B1 20030923**

DOCDB simple family (application)

**EP 00104373 A 20000302; JP 5586799 A 19990303; US 51822000 A 20000303**